

Explanation of “Shorthand” used in the Weather Observations

The shorthand used in the weather observations takes the following form:

TIME – WIND – VISIBILITY – WEATHER – CLOUD – TEMPERATURE/DEWPOINT – PRESSURE – REMARKS

An example of an observation is:

1200z 27015G27KT 8000 –SHRA 6Cu012 09.4/07.6 998

TIME

This is given in GMT (z) throughout the year. In the above example 1200z means 1200 GMT.

WIND

The mean wind direction and speed are always given. The wind direction is given in degrees from true north and refers to the direction from which the wind is blowing. The wind speed is given in knots. The maximum gust during the past hour is also given (in knots) when significant gusts are occurring. In the above example 27015G27KT has the following meaning:

- 270 = wind blowing from 270 deg i.e. from due west
- 15 = mean (or average) wind speed 15 knots (averaged over 10 minutes)
- G27 = max gust 27 knots during the past hour
- KT = confirms that the wind speeds are in knots

If no significant gusts were occurring the example above would take the form 27015KT.

A wind from due north is from 360 deg. A wind from due south is from 180 deg. To convert from knots to miles per hour the wind speeds should be increased by 15%. Therefore, 10 knots is 11½ mph. While 20 knots is 23 mph.

VISIBILITY

This is given in metres up to 9999 metres and in km above that. In the example above, 8000 means a visibility of 8000 metres, or 8 km. A visibility of 200 metres would be shown as 0200. Visibilities of 10 km and above are given in plain language, in the form 20km.

WEATHER

This may appear rather complicated but it is not. It is a brief shorthand method of conveying quite a lot of information. The basic weather parameters are given by 2-letter descriptions

- RA** = rain
- DZ** = drizzle
- SN** = snow
- SG** = snow grains
- IC** = ice crystals

PL = ice pellets
GS = small hail
GR = large hail
SH = showers
BR = mist
FG = fog
FU = smoke
HZ = haze
VA = volcanic ash
DU = widespread dust haze
TS = thunderstorm

Precipitation intensities are indicated by the following

- = slight
(no symbol) = moderate
+ = heavy

Some additional descriptive abbreviations may be used, such as

MI = shallow
BC = patches
VC = in vicinity
FZ = freezing
RE = recent

These various abbreviations can be combined to give quite detailed descriptions. For example:

-DZ = slight drizzle
RA = moderate rain
+SN = heavy snow
BCMIFG = shallow fog patches
BLSN = blowing snow
-SHRA = slight rain shower
VCSH = showers in vicinity
+TSRAGS = heavy thunderstorm with rain and small hail
FG = fog

.....and so on.

The abbreviation **RE** is used when there has been weather of significance during the past hour but not at the time of the observation. This is usually placed at the end of the observation, after the pressure. For example **RE+RA** means heavy rain in the past hour

CLOUD

Three elements are given for each of one or more cloud layers. The elements are:

- Cloud amount, measured in eighths of the sky covered
- Cloud type
- height of cloud base above local ground level

Cloud amount

A figure between 1 and 8

Cloud Type

The various types are:

- St** = stratus
- Sc** = stratocumulus
- Cu** = cumulus
- Cb** = cumulonimbus
- As** = altostratus
- Ac** = altocumulus
- Ci** = cirrus
- Cs** = cirrostratus
- Cc** = cirrocumulus

Cloud height

This is given in hundreds of feet above local ground level. For example:

- 008 = 800 ft above local ground level
- 020 = 2000 ft above local ground level
- 250 = 25,000 ft above local ground level

Pulling these 3 elements together the following are example of what appear in the weather observations:

- 3St003** = 3/8 cover of stratus with a base 300 ft above local ground level
- 6Ac120** = 6/8 cover of altocumulus with a base 12,000 ft above local ground level
- 8Ci250** = 8/8 cover of cirrus with a base 25,000 above local ground level.

It should be remembered that Tideswell is about 1000 ft above sea level. Therefore, a cloud base of, say, 500 ft above Tideswell is 1,500 ft above sea level.

When there is no cloud present the word **SKC** (meaning sky clear) replaces the cloud information.

TEMPERATURE and DEW POINT

These are given in tenths of a degree Celsius. The example at the top of this document, **09.4/07.6** means that the temperature is 9.4 and the dew point is 7.6. Negative values are indicated by the “minus” sign. For example:

-01.7/-03.5 = temperature -1.7, dew point -3.5

PRESSURE

The pressure given is the air pressure in millibars adjusted to mean sea level.

REMARKS (RMK)

Amplifying remarks highlighting any current or recent items of interest.

ADDITIONAL INFORMATION

With the 0900z observations some additional information is given regarding the weather over the past 24 hours:

09-09z

Tx = maximum temperature during the 24 hours
Tn = minimum temperature during the 24 hours
RR = total rainfall (millimetres) during the 24 hours

09-21z (included only if 09-09z max temp occurs after 21z)

Tx = maximum temperature 09-21z

21-09z (included only if 09-09z min temp occurs before 21z)

Tn = minimum temperature 21-09z

15-09z (18-09z during the summer half of the year)

Tg = grass minimum temperature

00-24z

Sun = sunshine total (hours and tenths) for the previous day